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(54) Title: **X-RAY IMAGING TECHNIQUE**

(57) Abstract: A security system for detecting contraband such as explosives. The system has a source of radiation and a detector array. A detector array is made of many small detectors, each with a fast response time. The fast response time allows individual radiation photon interactions with each detector to be counted. By counting the number of interactions in an interval of time, the amount of radiation reaching the detector can be measured. The magnitude of the response from the detector to each radiation interaction allows measurement of the energy level of the photons interacting with the detector. Such a system provides significant flexibility in analyzing data collected from items under inspection. For example, objects such as contraband can be identified within the item under inspection by processing the data to accurately determine both the density and type of material.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/12110

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 23/04
US CL : 378/57

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 378/57

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,974,111 A (Krug et al) 26 October 1999 (26.10.1999) See entire document.	1-84
Y	US 5,044,002 A (Stein) 27 August 1991 (27.08.1991) See entire document.	1-84
Y	US 5,040,199 A (Stein) 13 August 1991 (13.08.1991) See lines 46-53 of column 7.	1-84

Further documents are listed in the continuation of Box C.

See patent family annex.

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